

Appl. No. 10/714,036  
Reply to Office Action mailed May 18, 2007

### REMARKS

This is a full and timely response to the Office Action of May 18, 2007. By the present Amendment, claims 1, 4, 10, 11, 14, 19, 22, 23 and 27 have been amended to more particularly and distinctly point out the novelty and non-obviousness of the present invention. Reconsideration and allowance of the application and all presently pending claims are respectfully requested.

As disclosed in the specification of the presently pending application (U.S. Publication No. 2004/0102957), the present invention provides a system and method for speech translation using remote devices which can detect topics and recognize context in messages to be translated (see paragraphs 0056-0065). In one aspect, the present invention can segment text into its constituent stories, identify original topics and match content to those topics already identified. In a further aspect, the present invention can match content words in the input stream of the message to be translated with nodes in an ontological database. The present invention employs the ontologies for topic detection in real-time speech and text translation. Thus, unlike statistical-based topic detectors, the present invention requires very little context to make a topic detection. Accordingly, the speed *and* accuracy of translation are increased dramatically. Such advantages are particularly prized within the realm of real-time speech translation using remote devices.

### Response to 35 USC 102 and 103 rejections

In the Office Action dated May 18, 2007, the Examiner has rejected claims 1-13, 16-17 and 20-27 under 35 USC 102(b) based on U.S. Patent Application Publication No. 2002/0069048

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to Sadhwani et al. (hereinafter "Sadhwani"). While the Examiner has noted that claims 1-27 in their entirety are rejected under 35 USC 102 on page 3 of the Office Action, Applicant notes that there is no discussion of claims 14-15 and 18-19 in the ensuing examiner discussion on pages 3-12 of the Office Action. Since the Examiner has rejected claims 14-15 and 18-19 under 35 USC 103(a) as being unpatentable based on Sadhwani in view of U.S. Patent No. 5,535,120 to Chong et al. (hereinafter "Chong") on pages 12-15 of the Office Action, and since the Examiner has noted elements of claims 14-15 and 18-19 that are not found in Sadhwani, Applicant has assumed that claims 14-15 and 18-19 are only rejected under 35 USC 103. Based on the above amendments and the present remarks, Applicant submits that these rejections have been traversed and that the present claims are allowable over all prior art of record, considered singly or in combination.

By the present amendment, claim 1 has been amended to recite that the speech translation application includes a plurality of translation dictionaries including at least one core language dictionary and a plurality of sub-language dictionaries. Claim 1 as amended further recites that the method includes the steps of detecting a first topic based on the voice input signal by matching words in the input signal to nodes in an ontological database, associating at least a first one of the translation dictionaries with the input signal based on the detected topic, and translating the voice input signal from a source language to a target language message using said speech translation application and the first one of the translation dictionaries. Support for these amendments can be found, for example, in paragraphs 0056-0065 and Fig. 2 of the present application publication. Claims 10 and 11 have been amended similarly to claim 1.

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Claims 4 and 14, dependent from claims 1 and 11, respectively, recite the aspect of the present invention of detecting a second topic based on an additional input signal, and associating at least a second dictionary with the second input signal based on the detected second topic. As described above, this capability allows the present invention to fluidly perform accurate and fast translations for communications that can change topic rapidly, as ordinary voice communication e-mails and text messaging are known to do. Claim 19, dependent from claim 11, recites the aspect of the present invention whereby the translation apparatus can detect a plurality of topics in a received message, including identify new topics and identifying the recurrence of a previously identified topic. Support for these amendments can be found, for example, in paragraphs 0056-0065 of the present application publication.

Further by the present amendment, claim 22 has been amended to recite that the translation device provided as part of the system claimed therein is capable of: providing a speech translation application having access to a plurality of translation dictionaries including at least one core language dictionary and a plurality of sub-language dictionaries; detecting a first topic based on the received speech element of the first message without using statistical topic detection; associating at least a first one of the translation dictionaries with the received speech element based on the detected topic; and translating the message speech element from a first language of the language pair to a second language of the language pair using the determined language pair and the first one of the translation dictionaries. Support for the amendments to

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claim 22 can also be found, for example, in paragraphs 0056-0065 and Fig. 2 of the present application publication. Claims 23 and 27 have been amended similarly to claim 22.

The Sadhwani reference

The Sadhwani reference cited by the Examiner describes a system for transmitting information from a first device to a second device and optionally translating the information along the way. A wide variety of devices, languages and message types are described; however, the Sadhwani reference merely refers to known software applications for translation (see paragraph 0055). There is no discussion whatsoever of context or topic recognition in Sadhwani. Indeed, there is no single mention of either term in the entire disclosure. Accordingly, Sadhwani teaches nothing with regard to detecting a topic of a message to be translated, and employing a dictionary based on the detected topic.

Because Sadhwani does not teach each and every element of the invention as claimed in the independent claims, there can be no rejection based on 35 U.S.C. § 102. Further, because Sadhwani does not suggest or provide motivation for the claimed invention, either singly or in combination with any other reference of record, there can be no rejection of these claims under 35 U.S.C. § 103. The prior art must teach or suggest *all* claim elements in order to find anticipation or obviousness, and *all* words in a claim must be considered in judging the patentability of that claim against the prior art (see MPEP §§ 706.02(j) and 2143.03). Applicant therefore respectfully submits that the invention as presently claimed is not disclosed or suggested by the prior art of

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record. Applicant further submits that each of the dependent claims is similarly allowable as being dependent from an allowable independent claim.

The Chong reference

Applicant submits that the Chong reference neither teaches nor suggests the invention as claimed herein. Chong discloses no topic detection capability that performs by matching words in a given message with nodes in an ontological database, as claimed in claims 1, 10 and 11. Further, Chong discloses no topic detection capability performed without using statistical topic detection, as claimed in claims 22, 23 and 27.

On page 15 of the Office Action, the Examiner has cited column 4, line 19 as the basis for rejecting original claim 19, which had stated the step of accessing a specialized dictionary based on a determined context of the received message. The Examiner specifically interprets the words "deemed applicable" as Chong's disclosure of choosing a dictionary based on the context of the information. In fact, upon reading Chong's further disclosure from column 5, line 61 to column 7, line 3, it is apparent that Chong contemplates reading data specified on a cover page, for example, that designates the core language and sublanguage selections for a given message translation (see also, column 13, lines 25-35 ("the Dictionary Control Module...determines the selection of core and sublanguage dictionaries to be used by the Machine Translation Module 20, based on the control data provided by the Recognition Module 12.")). Indeed, there is no discussion of topic detection in Chong, no mention of the word "topic" therein, and where Chong

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describes its methods of machine translation, topic detection is not identified even generally (see column 10, lines 1-11).

For the above reasons, Applicant submits that neither the Sathwani nor Chong reference, either singly or in combination, discloses, teaches or suggests the invention of the claims as presented by this Amendment. Applicant thus submits that these claims are allowable, and that the remaining dependent claims are also allowable based upon being dependent from an allowable independent claim.

**Response to Provisional Double Patenting rejection**

On pages 2-3 of the Office Action, the Examiner has provisionally rejected claims 11 and 12 of the present application based on co-pending Application No. 10/713,448. Based on the present amendments, Applicant submits that this rejection is hereby moot.

For all of the above reasons, Applicant submits that none of the cited references, taken either singly or combined, teaches or suggests the system and method of the present invention as presently claimed, and that the rejections in the Office Action of May 18, 2007 have been traversed.

**CONCLUSION**

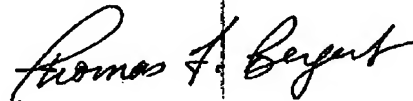
Based on the foregoing, Applicant submits that the present application is in position for prompt adjudication and allowance. Applicant believes that all of the claims currently pending

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in the present application are now in condition for allowance, and an early notice to that effect is earnestly solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the present application, the Examiner is invited to contact Applicant's undersigned representative at the address and phone number provided below. A three-month extension of time is being filed simultaneously with this Amendment. The Commissioner is hereby authorized to charge Deposit Account No. 50-0766 in payment of the required fees.

Respectfully submitted,  
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Attached: Petition for 3-month extension of time

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